APPENDIX

APPENDIX

FEATURED IN THIS SECTION

Fairfax County IT Standards

OPERATING SYSTEM:	
Desktop, Laptop	Windows 2000 Professional
DESKTOP APPLICATIONS:	
Word Processor	Microsoft Word XP
Spreadsheet	Microsoft Excel XP
Presentation	Microsoft PowerPoint XP
Database	Microsoft Access XP
E-Mail Client	Microsoft Outlook 2002 / Outlook Web Access (latest release)
Project Management	Microsoft Project 2002
Graphics	Visio 2002
SPECIALTY APPLICATIONS:	
Web Browser	Microsoft Internet Explorer (latest release)
Antivirus	Norton AntiVirus (latest release) for Workstations and Servers
Mainframe 3270 Emulation Software	IBM PC2370 (Other products under evaluation)
GIS	Arc/Info 8.2 ArcView 3.2 ArcView 8.2 ERDAS 8.6 Map Objects 2.1 Map Objects Internet Map Server 2.0 Arc Internet Map Server 4.1 ArcSDE 8.1.2
SERVERS:	
Operating System	Microsoft Windows 2000 Microsoft Windows 2000 Advanced Server (clustering or servers with 4 processors or more) AIX (latest release) Solaris (latest release) OS/390 2.10 (migrating to z/OS 1.4
Thin Client Access	Citrix MetaFrame XPe
Hardware	Intel (Windows) IBM p-Series (UNIX) SUN (UNIX) IBM S390 (Mainframe)
Backup	Tivoli Storage Manager 5.1 OS/390 DFSMS
Storage	SAN (Hitachi)
E-Mail	Microsoft Exchange Server 2000 Enterprise Edition Lsoft ListServ
Web Application Servers	Microsoft Internet Information Server (latest release) Web.PB (for legacy client/server applications) .NET FRAMEWORK (latest release) Active Server Pages /ASP.NET (latest release)
Database	Oracle 8 or higher DB2 Release 6 Microsoft SQL Server 2000 (more than 5 users) Access XP (less than 5 users)
Communications Protocol	TCP/IP

CHART A: PLATFORM ARCHITECTURE STANDARDS:
END USER HARDWARE

COMPONENT	DESKTOPS	DESKTOPS/ HIGH END USERS	LAPTOPS	LAPTOPS/ HIGH END USERS	HAND HELDS
CPU	Pentium IV 2.0GHz	Pentium IV 3.0 GHz,	Pentium IV 1.6 GHz	Pentium IV 2.0 GHz	N/A
DISK CONFIGURATION	40GB Hard Drive, 3.5 Floppy, 48X CD-ROM	80GB SCSI, 10,000 RPM Hard Drive, 3.5 Floppy, 48X CD-ROM	40GB Hard Drive, 3.5 Floppy, 48X CD-ROM	40-80GB Hard Drive, 3.5 Floppy, 48X CD-ROM	N/A
RAM	256MB DIMMS, expandable	512MB to 1GHz MB expandable	512MB	1GHz	16MB
MONITOR	17" SVGA, High Res., Flat	17" SVGA, High Res. Flat. If necessary - 21" SVGA, High Res., Diamond Fire GI 1	Active/Passive Matrix (dependent on laptop resident applications)	Active/Passive Matrix (dependent on laptop resident applications)	Active Matrix, TFT Color Screen
INTERFACE CARD(S)	Ethernet 10/100 Base- T	Ethernet 10/100 Base- T	Xircom Combo (modem $ ethernet) PC card	Xircom Combo (modem $ ethernet) PC card	N/A
OPERATING SYSTEM	Windows 2000 Pro	Windows 2000 Pro	Windows 2000 Pro	Windows 2000 Pro	Easy Sync; Palm OS Software
MAINTENANCE	3 Year on-site, next business day	3 Year on-site, next business day	3 Year on-site, next business day	3 Year on-site, next business day	N/A
ADDITIONAL HARDWARE REQUIREMENTS	Sound Card, 2 USB ports UL Approved Surge Protector (new)	Sound Card, 2 USB Ports UL Approved Surge Protector (new) Additional Slots to support hard drive and RAM expansion	UL Approved Surge Protector (new) Back-up Battery (in addition to default) Docking Station (if used as desktop) Security Lock	UL Approved Surge Protector (new) Back-up Battery (in addition to default) Docking Station (if used as desktop) Security Lock	Power Charger
MF 3270 EMULATION	IBM PC 3270 Version 4.0 / 5.5	IBM PC 3270 Version 4.0 / 5.5 Hummingbird	IBM PC 3270 Version 4.0 / 5.5	IBM PC 3270 Version 4.0 / 5.5 Hummingbird	N/A
THIRD PARTY SOFTWARE	Symantec Anti Virus, Enterprise Edition Microsoft Internet Explorer (latest release) MS Office Suite XP MS Outlook MS SMS Client	Symantec Anti Virus, Enterprise Edition Microsoft Internet Explorer (latest release) MS Office Suite XP MS Outlook MS SMS Client	Symantec Anti Virus, Enterprise Edition Microsoft Internet Explorer (latest release) MS Office Suite XP MS Outlook MS SMS Client	Symantec Anti Virus, Enterprise Edition Microsoft Internet Explorer (latest release) MS Office Suite XP MS Outlook MS SMS Client	N/A
PRE-INSTALL OPTIONS	All components (hardware) installed	All components (hardware) installed	All components (hardware) installed	All components (hardware) installed	N/A
PREFERRED MANUFACTURER	Dell	Dell	Dell	Dell	Blackberry; Palm
OPTIONAL (AS REQUIRED FOR BUSINESS NEEDS)	CD-RW Zip Drive (if stand-alone or frequent off-site usage/storage of files) DVD Speakers/Head Phones Additional memory/ hard drive	CD-RW Zip Drive (if stand-alone or frequent off-site usage/storage of files) DVD Speakers/Head Phones Additional memory/ hard drive	CD-RW Zip Drive (if stand-alone or frequent off-site usage/storage of files) DVD Speakers/Head Phones Additional memory/ hard drive Carry Case	CD-RW Zip Drive (if stand-alone or frequent off-site usage/storage of files) DVD Speakers/Head Phones Additional memory/ hard drive Carry Case	Carry Case

CHART B: PLATFORM ARCHITECTURE STANDARDS:
FILE/PRINT/WEB/GIS SERVICES

COMPONENT	FILE/PRINT SERVERS (INTEL)	WEB SERVERS (INTEL)	GIS SERVERS (INTEL)
TYPE	INTEL	INTEL	INTEL
POWER	Redundant, UPS required if not EOC resident	Redundant, UPS required if not EOC resident	Redundant, UPS required if not EOC resident
FAULT TOLERANCE / DISK CONFIGURATION	Operating System Drives - Raid 1 (Mirrored) Database/Application Drives Raid 5 (utilizing SAN if EOC resident)	Operating System Drives - Raid 1 (Mirrored) Database/Application Drives Raid 5 (utilizing SAN if EOC resident)	Operating System Drives - Raid 1 (Mirrored) Database/Application Drives Raid 5 (utilizing SAN if EOC resident)
CPU	Dual 2.0 MHz	Dual 2.0 MHz	Dual 2.8 MHz
NETWORK INTERFACE CARDS	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T
OPERATION SYSTEM(S)	Windows 2000 Server Windows 2000 Advanced Server (Clustering)	Windows 2000 Server Windows 2000 Advanced Server (Clustering)	Windows 2000 Server Windows 2000 Advanced Server (Clustering)
MONITOR	17" SVGA Color, if non-EOC site Not required if EOC resident	17" SVGA Color, if non-EOC site Not required if EOC resident	17" SVGA Color, if non-EOC site Not required if EOC resident
RAM	4.0 GB Minimum Cache 256MB	4.0 GB Minimum Cache - Database/Application specific	8.0 GB Minimum Cache - Database/Application specific
FILE SYSTEMS	NTFS	NTFS	NTFS
THIRD PARTY SOFTWARE REQUIREMENTS	Symantec Antivirus, Enterprise Edition MS SMS Client	Symantec Antivirus, Enterprise Edition MS SMS Client Internet Information Server (latest edition)	Symantec Antivirus, Enterprise Edition MS SMS Client
PREFERRED MANUFACTURER	Dell	Dell	Dell
MAINTENANCE	1 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included
ADDITIONAL HARDWARE	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)
STORAGE AND BACKUP HARDWARE/SOFTWARE	Tivoli Storage Manager Enterprise Backup Solution Client	Tivoli Storage Manager Enterprise Backup Solution Client	Tivoli Storage Manager Enterprise Backup Solution Client

CHART C: PLATFORM ARCHITECTURE STANDARDS:
DATABASE/APPLICATION SERVERS

COMPONENT	DATABASE SERVERS (INTEL)	DATABASE SERVERS (UNIX)	APPLICATION SERVERS (INTEL)	APPLICATION SERVERS (UNIX)
TYPE	INTEL	UNIX	INTEL	UNIX
POWER	Redundant, UPS required if not EOC resident	Redundant, UPS required if not EOC resident	Redundant, UPS required if not EOC resident	Redundant, UPS required if not EOC resident
FAULT TOLERANCE / DISK CONFIGURATION	Operating System Drives - Raid 1 (Mirrored) Database/Application Drives - Raid 5 (utilizing SAN if EOC resident	Operating System Drives - Raid 1 (Mirrored) Database/Application Drives - Raid 5 (utilizing SAN if EOC resident	Operating System Drives - Raid 1 (Mirrored) Database/Application Drives - Raid 5 (utilizing SAN if EOC resident	Operating System Drives - Raid 1 (Mirrored) Database/Application Drives - Raid 5 (utilizing SAN if EOC resident
CPU	Quad 2.0 MHz	Quad 1.5 MHz	Dual 2.8 MHz	Dual 1.5 MHz
NETWORK INTERFACE CARDS	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T
OPERATION SYSTEM(S)	Windows 2000 Server Windows 2000 Advanced	AIX (latest release) Solaris (latest release)	Windows 2000 Server Windows 2000 Advanced	AIX (latest release) Solaris (latest release)
MONITOR	17" SVGA Color, if non-EOC site Not required if EOC resident	Serially Connected Monochrome Not required if EOC resident	17" SVGA Color, if non-EOC site Not required if EOC resident	Serially Connected Monochrome Not required if EOC resident
RAM	8.0 GB Minimum Cache - Database/Application specific	8.0 GB Minimum Cache - Database/Application specific	8.0 GB Minimum Cache - Database/Application specific	8.0 GB Minimum Cache - Database/Application specific
FILE SYSTEMS	NTSF	Solaris / AIX	NTSF	Solaris / AIX
THIRD PARTY SOFTWARE REQUIREMENTS	Symantec Antivirus, Enterprise Edition MS SMS Client	Symantec Antivirus, Enterprise Edition	Symantec Antivirus, Enterprise Edition MS SMS Client	Symantec Antivirus, Enterprise Edition
PREFERRED MANUFACTURER	Dell	IBM/SUN	Dell	IBM/SUN
MAINTENANCE	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included
ADDITIONAL HARDWARE REQUIREMENTS	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Rack mountable rails if EOC resident Minimum 2 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Rack mountable rails if EOC resident Minimum 2 Open Slots to facilitate system expansion HBAs (if connected to SAN)
STORAGE AND BACKUP	Tivoli Storage Manager Enterprise Backup Solution Client TDP for Oracle or SQL server	Tivoli Storage Manager Enterprise Backup Solution Client	Tivoli Storage Manager Enterprise Backup Solution Client TDP for Oracle or SQL server	Tivoli Storage Manager Enterprise Backup Solution Client

CHART D: DATABASE & APPLICATION STANDARDS:
SERVERS

COMPONENT	MORE THAN FIVE (5) CONCURRENT USERS	LESS THAN FIVE (5) CONCURRENT USERS	
DATABASE SOFTWARE	Oracle (latest release) Microsoft SQL Server (latest release)	Access XP	
CONFIGURATION	WEB Enabled PKI Enabled		
MODE	See DIT Oracle Standards Documentation		
SOFTWARE / DEVELOPMENT TOOLS	ASP.NET, PowerBuilder, Visual Basic.Net, COBOL	Access, PowerBuilder, Visual Basic, COBOL	
SCHEDULER	CRON, AT	CA7, AT, CRON	
AD HOC REPORT TOOLS	Crystal Reports, SAS, QMF	Crystal Reports	
WORKSTATION REQUIREMENTS	Oracle Client Suite, ODBC Drivers	ODBC Drivers	

ENTERPRISE SERVERS	MAINFRAME	INTERNET / INTRANET	GIS
DATABASE SOFTWARE	DB2, VSAM	Index Server (w PDF filter), ASP.net, ListServ (eMail), Neon Systems Shadow Direct ODBC Client, CA VisualExpress ODBC Client, PowerBuilder Web.PB, Enterprise Monitor 5.0, Web Trends, Windows Load Balancing System	Oracle 8.8.0.5, 8.1.7
SOFTWARE / DEVELOPMENT	COBOL, CICS, TSO, JCL, C++, REXX	Visual Interdeveloper, Homesite 4.0, Visual Basic 6.0, Visual Studio.Net, asp.net, PowerBuilder, Visual Basic.Net	Arc/Info 8.0.2, ArcView 3.2, ArcExplore 3.0, Map Objects 2.0, Map Objects Light 1.0, Map Objects Internet Map Server 2.0, arc Internet Map Server 3.0, ArcSDE 8.0, Visual Basic
MIDDLEWARE	web Methods		
SCHEDULER	CA7		
AD HOC REPORT TOOLS	Crystal Reports, SAS, Easytrive Plus		
WORKSTATION REQUIREMENTS	Mainframe 3270 Emulation Software, TCP/IP Connectivity	Microsoft Internet Explorer (latest release)	Terminal Server Client, Citrix Metaframe, Client/Active X Plugin

CHART E: DATA COMMUNICATIONS NETWORK ARCHITECTURE STANDARDS

COMPONENT	MINIMUM STANDARD
WIRING	Twisted Pair, CAT 5/5e
ROUTER	Cisco
SWITCH	Cisco
TOPOLOGY	Ethernet
PROTOCOL	TCP/IP
CIRCUIT TYPE	ATM
NETWORK SECURITY	CISCO PIX Firewall
NETWORK MANAGEMENT	IBM NetView Cisco Works 2000 CA Unicenter

DATA COMMUNICATIONS STANDARDS

NETWORK INTERFACE CARDS

Mother Board	Primary NIC	Secondary NIC	Laser Printer NIC
Ethernet	3COM	IBM	HP Jet Direct

The exact make and model is determined by the end-station standard. Secondary NIC is a backup product in case of difficulty with the availability of the Primary NIC or special end-node requirements. All IP-addressable printers

NETWORK PROTOCOLS

Current	Future
TCP/IP	TCP/IP only
SNA (DLSW)	
OSPF	

CABLING STANDARDS

Structured cabling based on the ANSI/TIA/Eia and ISO standards.

A) Horizontal (cabling and pathways)

Current	Future
CAT5/5e UTP and SCTP	CAT6 UTP and SCTP

B) Outlets

Current	Future
Category 5/5e Cabling	Category 6 Cabling
Siemen's 4 outlet modular faceplates	
Color-coded inserts (to identify the media being used in each outlet)	
Voice and data termintaed at the same faceplate.	

C) Between Buildings / Backbone

Current	Future
Dependent on Distance 12 strand "single mode" OFNP, single mode optical fiber. 62.5/125 and 5/125 OFNP multi-mode and single-mode optical fiber.	Investigating wireless between buildings and within certain areas of buildings